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(609)633-1408

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF HAZARDOUS WASTE MANAGEMENT

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Deputy Director
Responsible Party Remedial Action

IN THE MATTER OF
STANDARD CHLORINE
CHEMICAL CORPORATION
KEARNY, NEW JERSEY

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:

ADMINISTRATIVE
CONSENT
ORDER

This Administrative Consent Order is issued pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP" or the "Department") by N.J.S.A. 13:1D-1 et seq. and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq. and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. and duly delegated to the Assistant Director for the Responsible Party Cleanup Element of the Division of Hazardous Waste Management pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. Standard Chlorine Chemical Corporation (hereinafter, "SCCC"), a New Jersey corporation, is the owner of the property designated as Block 287, Lot 50, located at 1035 Belleville Turnpike in Kearny, Hudson County. Standard Naphthalene Products, Inc. (hereinafter "SNP"), a wholly-owned subsidiary of SCCC, is the owner of the property designated as Block 287, Lots 48, 49, 51, 52, 52R, located at 1015-1025 Belleville Turnpike, Kearny, Hudson County. The properties referenced in this paragraph designated as Block 287, Lots 48, 49, 50, 51, 52, 52R are collectively referred to herein as the "Site". Portions of the Site were previously owned by Koppers Company, Keaton Rubber Company, and the Edison Company. According to SCCC, Koppers Company operated a naphthalene processing facility at the Site prior to 1962. The Site consists of approximately twenty-five (25) acres and is bounded by the Hackensack River to the east, Belleville Turnpike to the west, and by property owned by Diamond Shamrock Corporation to the north and Koppers Company to the south. Operations by Diamond Shamrock and Koppers Company on these properties adjacent to the Site were discontinued during the 1970's. There is a lagoon system at the Site which has two segments designated as the east lagoon and west lagoon. The east lagoon is located approximately 25 feet from the Hackensack River.

2. SCCC's operations at the Site included manufacturing of moth crystals and flakes from dichlorobenzene. SCCC separated dichlorobenzenes at the Site from 1963 until 1982. SCCC also separated and stored 1,2,4-trichlorobenzene at the Site from 1970 until 1980. SNP processed liquid petroleum naphthalene at the Site from 1963 until 1982. Raw materials were transported to the Site by rail and tank truck for processing. Chloroben Chemical Corporation (hereinafter "Chloroben"), a

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subsidiary of SCCC, currently operates a batch formulation and blending operation at the Site for various drain cleaners known as "chloroben". From 1963 until 1981, chloroben products were made at the Site from orthodichlorobenzene. Chloroben production at the Site currently includes the use of hydrochloric acid, sulfuric acid, and methyl benzoate. The Site is also used for office and warehouse purposes.

3. SCCC completed a NJDEP Selected Substances Report in August 1980 which listed the following substances present at the Site: 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene and naphthalene. The report also indicated that SCCC disposed an estimated 12,000 pounds per year of waste from the processing of 1,2,4-trichlorobenzene into the lagoon system at the Site between 1975 and 1979.

4. SCCC discharges septic tank overflow and storm water runoff into a drainage ditch located in the southwest portion of the Site pursuant to a NJPDES Discharge to Surface Water (DSW) Permit No. NJ00001856, which became effective on February 1, 1986. The drainage ditch leads to Dead Horse Creek, a tributary of the Hackensack River. The septic tank system receives boiler blowdown and laboratory wash water. A former permitted discharge of non-contact cooling water from the naphthalene operation to the Hackensack River was discontinued in approximately 1982.

5. By letter dated February 28, 1983, the Department directed SCCC to conduct a hydrogeological investigation to determine the impact of the Site on the ground water, based upon the following findings:

- a. A NJDEP inspection of the Site on August 31, 1982 revealed that portions of the Site were covered with chromium contaminated fill materials which were reported by SCCC to have been generated at the adjacent Diamond Shamrock facility. Yellowish pools of storm water runoff and yellow precipitate were observed, which suggested the presence of hexavalent chromium. Spillages of products identified as naphthalene and dichlorobenzene were observed on the ground surface at the Site in several areas.
- b. A NJDEP inspection of the Site on June 23, 1982 disclosed that the lagoon system at the Site was reported by SCCC to have been used for waste disposal by the former property owner, Koppers Company.
- c. Ground water samples collected by Diamond Shamrock from a ground water monitoring well (identified as MW #9) on Diamond Shamrock's property adjacent to SCCC's northern boundary revealed contamination with naphthalene, dichlorobenzenes, and trichlorobenzenes, which were suspected by NJDEP to have originated from the SCCC Site since these compounds were processed at the Site by SCCC up until the early 1980s.

6. On July 12, 13, and 14, 1983, SCCC installed ten (10) ground water monitoring wells at the Site in five (5) locations, as indicated in Attachment I (incorporated herein by reference). Each location included a cluster of one (1) shallow well (8 to 10 feet deep) and one (1) deep well

(18 to 22 feet deep). Five (5) soil samples were collected during the installation of monitoring wells at these locations and analyzed for volatile organic compounds. Soil samples collected at depths between fifteen (15) and seventeen (17) feet at locations one (1), four (4) and five (5) identified on Attachment 1 were found to be contaminated with volatile organic compounds at concentrations of 178,426 parts per billion (ppb), 4,955 ppb, and 4,315 ppb, respectively, of total volatile organic compounds. The contaminants detected included the following substances: ortho-dichlorobenzene, meta-dichlorobenzene, para-dichlorobenzene, trichloroethylene, tetrachloroethylene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene, and naphthalene.

7. On August 4, 1983, SCCC collected ground water samples from the ten (10) monitoring wells at the Site. The results of the analyses of these samples, summarized in Attachment II (incorporated herein by reference), revealed ground water contamination with the following substances: benzene, chlorobenzene, dichlorobenzenes, tetrachloroethylene, trichloroethylene, toluene, and naphthalene.

8. In 1985, NJDEP conducted the Phase II Dioxin Investigation, which identified twenty-three (23) sites in New Jersey suspected of contamination with halogenated dibenzo-p-dioxins, specifically 2,3,7,8-tetrachlorodibenzo-p-dioxin (hereinafter, "dioxin"). This program was sponsored by the NJDEP and United States Environmental Protection Agency (USEPA) to identify potential dioxin contamination in the State of New Jersey.

9. The SCCC Site was included in the NJDEP Phase II Dioxin Investigation because SCCC once produced and stored two dioxin related compounds at the Site, 1,2,4-trichlorobenzene and orthodichlorobenzene. SCCC produced orthodichlorobenzene at the Site from 1963 until 1981 and 1,2,4-trichlorobenzene between 1970 and 1980.

10. As part of the NJDEP Phase II Dioxin Investigation, ten (10) areas were identified at the Site as having the potential for dioxin contamination. In May 1985, as part of the NJDEP Phase II Dioxin Investigation, seventeen (17) soil samples were collected from these areas, as indicated in Attachment III (incorporated herein by reference). The results of the analyses of these samples revealed that one (1) sample collected from the west lagoon was found to be contaminated with 59.5 ppb of dioxin.

11. On July 3, 1985, pursuant to the Executive Order Number 109 and Administrative Order EO.-109-1, NJDEP ordered SCCC to conduct further dioxin sampling to determine the extent of dioxin contamination at the Site.

12. On July 23, 1985, SCCC submitted a Sampling Plan for dioxin to NJDEP for review. SCCC selected seventeen (17) locations for obtaining a total of thirty-three (33) sediment and soil samples. SCCC subsequently revised this Sampling Plan pursuant to NJDEP comments. On August 5, 1985, SCCC submitted a final Sampling Plan which was approved by NJDEP.

13. On August 8, 9, and 10, 1985, SCCC collected soil and sediment samples at the Site for dioxin analysis in accordance with the sampling plan referenced in paragraph twelve (12) above. Samples were obtained from

surface and subsurface soils, lagoon sediments, Hackensack River sediments, and from within several building areas at the Site.

14. Laboratory analysis of the samples referenced in paragraph thirteen (13) above revealed dioxin contamination at several locations at the Site. Dioxin contamination was found in samples collected from the east lagoon, west lagoon, and the former dichlorobenzene distillation building at concentrations of 62.1 ppb, 55.6 ppb, and 9.6 ppb, respectively. During lagoon boring drilling activities, various waste materials were found in the bottom of the lagoons, including up to three (3) feet of white to brown colored crystals underlain by up to four (4) feet of a black tar substance.

15. A NJDEP inspection report dated October 17, 1985, disclosed that on October 7, 1985, the bottom of an above-ground storage tank on the Site ruptured while the tank was being filled, resulting in the discharge of approximately 4,000 gallons of 31% hydrochloric acid onto the ground at the Site. The acid flowed into a drainage ditch where it was contained within a diked area, neutralized with sodium hydroxide, and removed by SCCC using a vacuum system.

16. By letter dated April 24, 1986, NJDEP required SCCC to submit a work plan for further dioxin sampling to determine the horizontal and vertical extent of dioxin contamination at the Site.

17. On October 17, 1986, SCCC submitted a work plan for dioxin sampling to NJDEP. SCCC revised this work plan pursuant to NJDEP comments and it was approved by NJDEP on January 21, 1987.

18. From February 25 to March 18, 1987, SCCC collected samples in a grid fashion across the two lagoons at the Site as indicated in Attachment IV (incorporated herein by reference). Samples were collected at four depths at a total of twenty (20) locations. The first two (2) shallow sample intervals were analyzed and the two (2) deeper core samples for each location were archived to be analyzed for dioxin if the shallow samples revealed dioxin contamination.

19. The results of the analyses of the samples referenced in paragraph eighteen (18) above revealed dioxin contamination at concentrations ranging from 1.3 ppb to 69.6 ppb, exceeding the NJDEP dioxin action level of 1 ppb.

20. NJDEP required SCCC to analyze the archived samples collected from February 25, 1987 to March 18, 1987. The sampling analysis showed high concentrations (including two samples with concentrations of 237 ppb and 268 ppb) of dioxin at various locations and depths in the lagoons.

21. The extensive dioxin sampling and analysis conducted by SCCC indicate that dioxin contamination exists throughout the vertical extent of the waste material in the lagoons and across most of the horizontal extent of the lagoons. SCCC submitted a report to the Department dated May 1988 which summarized the results of the dioxin investigation and contained recommendations for further investigation of dioxin contamination at the Site.

22. Dioxin and the substances referenced in paragraphs five (5), six (6), seven (7), and fifteen (15) above are hazardous substances pursuant to

the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11b(k), and pollutants pursuant to the Water Pollution Control Act, N.J.S.A. 58:10A-3n.

23. The hazardous substances and pollutants referenced above were discharged and continue to discharge into the waters and onto the lands of the State of New Jersey in violation of the Spill Compensation and Control Act, specifically N.J.S.A. 58:10-23.11c and the Water Pollution Control Act, specifically N.J.S.A. 58:10A-6.

24. SCCC is responsible for the discharges referenced in paragraph twenty-three (23) above.

25. SCCC discharged the pollutants referenced above onto the lands and into the waters of the State of New Jersey without a valid New Jersey Pollutant Discharge Elimination System (NJPDES) permit in violation of the Water Pollution Control Act, specifically N.J.S.A. 58:10A-6.

26. Based on these FINDINGS, the Department has determined that SCCC has violated the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., specifically N.J.S.A. 58:10A-6, and the regulations promulgated pursuant thereto, N.J.A.C. 7:14A-1 et seq., specifically N.J.A.C. 7:14A-1.2(c) and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq., and regulations promulgated pursuant thereto, N.J.A.C. 7:1E-1.1 et seq.

27. To determine the nature and extent of the problem presented by the discharge of pollutants and hazardous substances at the site and to develop environmentally sound remedial actions, it is necessary to conduct interim remedial measures, and to conduct a remedial investigation and feasibility study of remedial action alternatives (hereinafter "RI/FS") for the Site. To correct the problems presented by the discharge, it is necessary to implement a remedial action plan. The Department believes the Appendices of this Administrative Consent Order to be, to the greatest extent possible, consistent with the National Contingency Plan.

28. To resolve this matter without the necessity for litigation, SCCC has agreed to conduct interim remedial measures, to conduct an RI/FS and to design and implement a remedial action alternative to remedy all pollution at the Site, emanating from the Site, or which has emanated from the Site.

ORDER

NOW THEREFORE IT IS HEREBY ORDERED AND AGREED THAT:

I. Reimbursement of Prior Costs

29. Within thirty (30) calendar days after the receipt of the Department's written summary accounting, SCCC shall submit the specified amount to the Department as payment for all costs incurred by the Department to date, in connection with the investigation of, and response to, the matters described in the FINDINGS hereinabove, including the costs associated with the preparation of this Administrative Consent Order. Payment of the above amount shall be made by a cashier's or certified check payable to the "Treasurer, State of New Jersey". Payment shall be submitted to the contact listed in paragraph fifty-six (56).

II. Remedial Investigation and Cleanup

A. Interim Remedial Measures

30. Within thirty (30) calendar days after the effective date of this Administrative Consent Order, SCCC shall submit to the Department a detailed draft Interim Remedial Measures Work Plan (hereinafter "IRM Work Plan") to remedy human health and/or environmental problems associated with this Site in accordance with the scope of work set forth in Appendix A, which is attached hereto and made a part hereof.

31. Within thirty (30) calendar days after receipt of the Department's written comments on the draft IRM Work Plan, SCCC shall modify the draft IRM Work Plan to conform to the Department's comments and shall submit the modified IRM Work Plan to the Department. The determination as to whether or not the modified IRM Work Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

32. Upon receipt of the Department's written final approval of the IRM Work Plan, SCCC shall implement the approved IRM Work Plan in accordance with the approved schedule therein.

B. Remedial Investigation

33. Within ninety (90) calendar days after the effective date of this Administrative Consent Order, SCCC shall submit to the Department a detailed draft Remedial Investigation Work Plan (hereinafter the "RI Work Plan") in accordance with the scope of work set forth in Appendices B, C and D, which are attached hereto and made a part hereof. The dioxin investigation report referenced in paragraph twenty-one (21) above shall be incorporated into the RI Work Plan.

34. Within thirty (30) calendar days after receipt of the Department's written comments on the draft RI Work Plan, SCCC shall modify the draft RI Work Plan to conform to the Department's comments and shall submit the modified RI Work Plan to the Department. The determination as to whether or not the modified RI Work Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

35. Upon receipt of the Department's written final approval of the RI Work Plan, SCCC shall conduct the remedial investigation in accordance with the approved RI Work Plan and the schedule therein.

36. SCCC shall submit to the Department a draft Remedial Investigation Report (hereinafter "RI Report") in accordance with Appendix B and the RI Work Plan and the schedule therein.

37. If upon review of the draft RI Report the Department determines that additional remedial investigation is required, SCCC shall conduct additional remedial investigation as directed by the Department and submit a second draft RI Report.

38. Within thirty (30) calendar days after receipt of the Department's written comments on the draft or second draft (only if applicable pursuant to the preceding paragraph) RI Report, SCCC shall modify the draft or second draft RI Report to conform to the Department's comments and shall submit the modified RI Report to the Department. The determination as to whether or not the modified RI Report, as resubmitted, conforms with the Department's comments and is otherwise acceptable by the Department shall be made solely by the Department in writing.

C. Feasibility Study

39. Within ninety (90) calendar days after receipt of the Department's written final approval of the RI Report, or as otherwise directed by the Department, SCCC shall submit to the Department a detailed draft Feasibility Study Work Plan (hereinafter, "FS Work Plan") in accordance with the scope of work set forth in Appendix E, which is attached hereto and made a part hereof.

40. Within thirty (30) calendar days after receipt of the Department's written comments on the draft FS Work Plan, SCCC shall modify the draft FS Work Plan to conform to the Department's comments and shall submit the modified FS Work Plan to the Department. The determination as to whether or not the modified FS Work Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

41. Upon receipt of the Department's written final approval of the FS Work Plan, SCCC shall conduct the feasibility study in accordance with the approved FS Work Plan and the schedule therein.

42. SCCC shall submit to the Department a draft Feasibility Study Report (hereinafter "FS Report") in accordance with Appendix E and the approved FS Work Plan and the schedule therein.

43. Within thirty (30) calendar days after receipt of the Department's written comments on the draft FS Report, SCCC shall modify the draft FS Report to conform to the Department's comments and shall submit the modified FS Report to the Department. The determination as to whether or not the modified FS Report, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

D. Remedial Action

44. The Department will designate the remedial action alternatives that meet the criteria set forth in Appendix E, Section I.D. Within thirty (30) calendar days after receipt of such designation, SCCC shall notify the Department which of these remedial action alternatives it will implement.

45. Within ninety (90) calendar days after SCCC's written notification of selection of the remedial action alternative it will implement, SCCC shall submit to the Department a detailed draft Remedial Action Plan in accordance with the scope of work set forth in Appendix F, which is attached hereto and made a part hereof.

46. Within thirty (30) calendar days after receipt of the Department's written comments on the draft Remedial Action Plan, SCCC shall modify the draft Remedial Action Plan to conform to the Department's comments and shall submit the modified Remedial Action Plan to the Department. The determination as to whether or not the modified Remedial Action Plan, as resubmitted, conforms to the Department's comments and is otherwise acceptable to the Department shall be made solely by the Department in writing.

47. Upon receipt of the Department's written final approval of the Remedial Action Plan, SCCC shall implement the approved Remedial Action Plan in accordance with the schedule therein.

E. Additional Remedial Investigation and Remedial Action

48. If at any time prior to SCCC's receipt of written notice from the Department pursuant to paragraph ninety-four (94) the Department determines that the criteria set forth in Appendix E (Section I.D.) are not being achieved or that additional remedial investigation and/or remedial action is required to protect human health or the environment, SCCC shall conduct such additional activities as directed by the Department and in accordance with this Administrative Consent Order.

F. Progress Reports

49. SCCC shall submit to the Department quarterly progress reports; the first progress report shall be submitted within forty-five (45) calendar days of the month following the first full quarter after the effective date of this Administrative Consent Order. Each progress report thereafter shall be submitted within forty-five (45) calendar days of the month following the quarter being reported. Each progress report shall detail the status of SCCC's compliance with this Administrative Consent Order and shall include the following:

- a. Identification of site and reference to this Administrative Consent Order;
- b. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) which were initiated during the reporting period;
- c. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) which were initiated in a previous reporting period, which are still in progress and which will continue to be carried out during the next reporting period;
- d. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) which were completed during this reporting period;
- e. Identify specific requirements of this Administrative Consent Order (including the corresponding paragraph numbers or schedule) which should have been completed during the reporting period and were not;

- f. An explanation of any non-compliance with any approved work plan(s), schedule(s) or Remedial Action Plan, and actions taken or to be taken to rectify non-compliance;
- g. Identify the specific requirements of this Administrative Consent Order (including the corresponding paragraph number or schedule) that will be initiated during the upcoming reporting period.

III. Permits

50. This Administrative Consent Order shall not be construed to be a permit or in lieu of a permit for existing or former activities which require permits and it shall not relieve SCCC from obtaining and complying with all applicable Federal, State and local permits necessary for any future activities which SCCC must perform in order to carry out the obligations of this Administrative Consent Order.

51. SCCC shall complete and submit complete applications for all Federal, State and local permits required to carry out the obligations of this Administrative Consent Order in accordance with the approved time schedules.

52. Within thirty (30) calendar days of receipt of written comments concerning any permit application to a Federal, State or local agency, or within a time period extended in writing by the Department, SCCC shall modify the permit application to conform to the agency's comments and resubmit the permit application to the agency. The determination as to whether or not the permit application, as resubmitted, conforms with the agency's comments or is otherwise acceptable to the agency shall be made solely by the agency in writing.

53. The terms and conditions of any such permit or permit modification shall not be preempted by the terms and conditions of this Administrative Consent Order even if the terms and conditions of any such permit or permit modification are more stringent than the terms and conditions of this Administrative Consent Order. To the extent that the terms and conditions of any such permit or permit modification are substantially equivalent with the terms and conditions of this Administrative Consent Order, SCCC waives any rights it may have to a hearing on such terms and conditions during any such permit process.

IV. Project Coordination

54. SCCC shall submit to the Department all documents required by this Administrative Consent Order, including correspondence relating to force majeure issues, by certified mail, return receipt requested or by hand delivery with an acknowledgement of receipt form for the Department's signature. The date that the Department executes the receipt or acknowledgement will be the date the Department uses to determine SCCC compliance with the requirements of this Administrative Consent Order and the applicability of stipulated penalties and any other remedies available to the Department.

55. Within seven (7) calendar days after the effective date of this Administrative Consent Order, SCCC shall submit to the Department the name, title, address and telephone number of the individual who shall be the

SCCC's contact for the Department for all matters concerning this Administrative Consent Order. The individual identified in the following paragraph shall be the Department's contact for all matters concerning this Administrative Consent Order.

56. SCCC shall submit four (4) copies of all documents required by this Administrative Consent Order, unless otherwise directed by the Department, to:

Dennis Hart, Chief
Bureau of State Case Management
Division of Hazardous Waste Management
Department of Environmental Protection
401 E. State Street
CN-028
Trenton, New Jersey 08625

57. SCCC shall notify, both verbally and in writing, the contact person listed above at least two weeks prior to the initiation of any field activities.

V. Financial Requirements

A. Financial Assurance

58. Within thirty (30) calendar days after the effective date of this Administrative Consent Order, SCCC shall obtain and provide to the Department financial assurance in the form of either an irrevocable letter of credit or a performance bond in the amount of \$1,000,000. SCCC shall also establish an irrevocable standby trust fund, with an initial deposit of One Thousand dollars (\$1,000.00). Within twelve (12) months after the effective date of this Administrative Consent Order, SCCC shall increase the then existing letter of credit or performance bond to \$2,000,000. Within eighteen (18) months after the effective date of this Administrative Consent Order, SCCC shall increase the then existing letter of credit or performance bond to \$3,500,000. Upon the passage of the thirtieth (30th) cumulative day of any failure to comply or timely comply with the major deliverable requirements of this Administrative Consent Order as listed in Attachment 1, all of SCCC's obligations pursuant to this paragraph 58 shall become due including, but not limited to, SCCC's obligation to submit to the Department the irrevocable letters of credit in the amounts specified in this paragraph. Any failure by SCCC to timely comply with any of the obligations set forth in this paragraph shall subject SCCC to stipulated penalties. The irrevocable letter of credit, the performance bond and the irrevocable trust fund agreement shall meet the following requirements:

1. Letter of credit

- a. Is identical to the wording specified in Appendix G for letters of credit, which is attached hereto and made a part hereof;
- b. Is issued by a New Jersey State or Federally chartered bank, savings bank, or savings and loan association; and

- c. Is accompanied by a letter from SCCC referring to the Letter of Credit by number, issuing institution and date and providing the following information: the name and address of the facility and/or site which is the subject of the Administrative Consent Order and the amount of funds securing the SCCC's performance of all its obligations under the Administrative Consent Order.
- d. If the bank selected by SCCC does not have its principal office in New Jersey, SCCC hereby agrees to arrange that such Bank, and the trustee, consent to jurisdiction of the courts of New Jersey should any litigation arise out of this Administrative Consent Order.

ii. Performance Bond

- a. Is identical to the wording specified in Appendix G for performance bonds, which is attached hereto and made a part hereof;
- b. The surety company issuing the performance bond shall, at a minimum, be among those listed as acceptable sureties on Federal bonds in the most recent version of Circular 570 issued by the U.S. Department of the Treasury, which is published annually on July 1 in the Federal Register; and
- c. Is accompanied by a letter from SCCC referring to the Performance Bond by number, issuing institution and date and providing the following information: the name and address of the facility and/or site which is the subject of the Administrative Consent Order and the amount of fund securing the company's performance of all its obligations under the Administrative Consent Order.

iii. Standby Trust

- a. Is identical to the wording specified in Appendix H, which is attached hereto and made a part hereof;
- b. The irrevocable standby trust fund may, at the discretion of the Department, be the depository for all funds paid pursuant to a draft by the Department against the letter of credit or payments made under the performance bond as directed by the Department;
- c. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or New Jersey agency;
- d. Is accompanied by an executed certification of acknowledgement that is identical to the wording specified in Appendix H.

59. SCCC shall establish and maintain the standby trust fund until terminated by the written agreement of the Department, the trustee and SCCC, or of the trustee and the Department if SCCC ceases to exist. SCCC shall maintain the letter of credit or performance bond until the Department provides written notification to SCCC that the financial assurance is no longer required for compliance with this Administrative Consent Order. In the event that the Department determines that SCCC has failed to perform any

of its obligations under this Administrative Consent Order, the Department may proceed to have the financial assurance deposited into the standby trust; provided, however, that before the Department draws on the letter of credit or makes a claim against the performance bond, the Department shall notify SCCC in writing of the obligation(s) which it has not performed, and SCCC shall have a reasonable time, not to exceed thirty (30) calendar days, unless otherwise approved in writing by the Department, to perform such obligation(s).

60. At any time, SCCC may apply to the Department to substitute other financial assurances in a form, manner and amount acceptable to the Department.

B. Project Cost Review

61. Which ever is later, seven hundred thirty (730) calendar days after the effective date of this Administrative Consent Order or within ninety (90) calendar days after receipt of the Department's written final approval of the RI Report, and annually thereafter on that same calendar day, SCCC shall submit to the Department a detailed review of all costs required for SCCC's compliance with this Administrative Consent Order. This cost review shall include a detailed summary of all monies spent to date pursuant to this Administrative Consent Order, the estimated cost of all future expenditures required to comply with this Administrative Consent Order (including any operation and maintenance costs), and the reason for any changes from the previous cost review submitted by SCCC.

62. At any time after SCCC submits the first cost review pursuant to the preceding paragraph, SCCC may request the Department's approval to reduce the amount of the financial assurance to reflect the remaining costs of performing its obligations under this Administrative Consent Order. If the Department grants written approval of the request, SCCC may amend the amount of the then existing letter of credit or performance bond. If the Department denies such request it shall provide SCCC with written summary of the reasons for such denial.

63. If the estimated cost of meeting SCCC's obligations in this Administrative Consent Order at any time increases to an amount greater than the financial assurance, SCCC shall, within thirty (30) calendar days after receipt of written notice of the Department's determination, increase the amount of the then existing letter of credit or performance bond so that it is equal to the estimated cost as determined by the Department. SCCC shall provide the amended financial assurance to the Department within seven calendar days (7) after it has been obtained.

C. Oversight Cost Reimbursement

64. Within thirty (30) calendar days after receipt from the Department of a written summary of all costs incurred in connection with its oversight functions of this Administrative Consent Order for a fiscal year, or any part thereof, SCCC shall submit to the Department a cashier's or certified check payable to the "Treasurer, State of New Jersey" for the full amount of the Department's oversight costs.

D. Stipulated Penalties

65. Upon a demand made by the Department, SCCC shall pay stipulated penalties to the Department for its failure to comply with any of the deadlines or schedules required by this Administrative Consent Order including those established and approved by the Department in writing pursuant to this Administrative Consent Order. Each deadline or schedule including such deadlines and schedules as modified pursuant to paragraph 87 not complied with shall be considered a separate violation and stipulated penalties shall begin to accrue on the day that performance is due or noncompliance occurs and shall continue to accrue through the final day of correction of the non-compliance. Payment of stipulated penalties shall be made according to the following schedule, unless the Department has modified the compliance date pursuant to the force majeure provisions hereinbelow:

<u>Calendar Days After Due Date</u>	<u>Stipulated Penalties</u>
1 - 7	\$ 500 per calendar day
8 - 14	1,000 per calendar day
15 - 21	3,000 per calendar day
22 - 28	5,000 per calendar day
29 - over	10,000 per calendar day

66. Any such penalty shall be due and payable fourteen (14) calendar days following receipt of a written demand by the Department. Payment of stipulated penalties shall be made by a cashier's or certified check payable to the "Treasurer, State of New Jersey".

67. SCCC agrees it will not seek to take as a tax deduction any payments submitted pursuant to the above paragraphs.

VI. Force Majeure

68. If any event as specified in the following paragraph occurs which SCCC believes or should believe may cause delay in the compliance or non-compliance with any provision of this Administrative Consent Order, SCCC shall notify the Department in writing within seven (7) calendar days of the delay or anticipated delay, as appropriate, referencing this paragraph and describing the anticipated length of the delay, the precise cause or causes of the delay, any measures taken or to be taken to minimize the delay, and the time required to take any such measures to minimize the delay. SCCC shall take all necessary action to prevent or minimize any such delay.

69. If the Department finds that: (a) SCCC has complied with the notice requirements of the preceding paragraph, (b) that any delay or anticipated delay has been or will be caused by fire, flood, riot, strike or other circumstances beyond the control of SCCC, and (c) SCCC has taken all necessary action to prevent or minimize any such delay, the Department shall extend the time for performance hereunder for a period no longer than the delay resulting from such circumstances. If the Department determines that (i) SCCC has not complied with the notice requirements of the preceding paragraph, (ii) the event causing the delay is not beyond the control of SCCC, or (iii) SCCC has not taken all necessary action to prevent or minimize the delay, this paragraph shall not be applicable and failure to comply with the provisions of this Administrative Consent Order shall

constitute a breach of the requirements of this Administrative Consent Order. The burden of proving that any delay is caused by circumstances beyond the control of SCCC and the length of any such delay attributable to those circumstances shall rest with SCCC. Increases in the cost or expenses incurred by SCCC in fulfilling the requirements of this Administrative Consent Order shall not constitute a force majeure. Delay in an interim requirement shall not automatically justify or excuse delay in the attainment of subsequent requirements. Force Majeure shall not include nonattainment of the goals, standards, guidelines and requirements set forth in the appendices attached hereto. Force Majeure shall not include contractor's breach, unless such breach falls within the requirements of a., b., and c. of this paragraph.

VII. Reservation of Rights

70. If SCCC fails to pay stipulated penalties pursuant to paragraph sixty-five (65), the Department may institute civil proceedings to collect such penalties or assess civil administrative penalties for the violations of this Administrative Consent Order; the Department may also bring an action in New Jersey Superior Court pursuant to N.J.S.A. 58:10A-10 to enforce the provisions of this Administrative Consent Order.

71. SCCC's payment of stipulated penalties pursuant to this Administrative Consent Order shall not preclude the Department from electing to pursue any injunctive relief to enforce the terms of this Administrative Consent Order.

72. The Department reserves the right to unilaterally terminate this Administrative Consent Order in the event SCCC violates the terms of this Administrative Consent Order.

73. Nothing in this Administrative Consent Order shall preclude the Department from seeking civil or civil administrative penalties against SCCC.

74. This Administrative Consent Order shall not be construed to affect or waive the claims of federal or State natural resource trustees against any party for damages for injury to, destruction of, or loss of natural resources.

75. The Department reserves the right to require SCCC to take or arrange for the taking of, any and all additional measures should the Department determine that such actions are necessary to protect human health or the environment. Nothing in this Administrative Consent Order shall constitute a waiver of any statutory right of the Department to require SCCC to undertake such additional measures should the Department determine that such measures are necessary.

VIII. General Provisions

76. This Administrative Consent Order shall be binding on SCCC, its principals, directors, officers, agents, successors, assignees and any trustee in bankruptcy or receiver appointed pursuant to a proceeding in law or equity.

77. SCCC shall perform all work conducted pursuant to this Administrative Consent Order in accordance with prevailing professional standards.

78. SCCC shall conform all actions pursuant to this Administrative Consent Order with all applicable Federal, State, and local laws and regulations.

79. All appendices referenced in this Administrative Consent Order, as well as all reports, work plans and documents required under the terms of this Administrative Consent Order are, upon approval by the Department, incorporated into this Administrative Consent Order by reference and made a part hereof.

80. Each field activity to be conducted pursuant to this Administrative Consent Order shall be coordinated by an onsite professional(s) with experience relative to the particular activity being conducted at the site each day, such as experience in the area of hydrogeology, geology, environmental controls, risk analysis, health and safety or soils.

81. Upon the receipt of a written request from the Department, SCCC shall submit to the Department all data and non-privileged information concerning pollution at and/or emanating from the site, or which has emanated from the site, including raw sampling and monitor data, whether or not such data and information was developed pursuant to this Administrative Consent Order.

82. SCCC shall make available to the Department all technical records and contractual documents maintained or created by SCCC or its agents in connection with this Administrative Consent Order.

83. SCCC shall preserve, during the pendency of this Administrative Consent Order and for a minimum of six (6) years after its termination, all data, records and documents in their possession or in the possession of their divisions, employees, agents, accountants, contractors, or attorneys which relate in any way to the implementation of work under this Administrative Consent Order, despite any document retention policy to the contrary. After this six year period, SCCC shall notify the Department within thirty (30) calendar days prior to the destruction of any such documents. If the Department requests in writing that some or all of the documents be preserved for a longer time period, SCCC shall comply with that request. Upon receipt of a written request by the Department, the SCCC shall submit to the Department all non-privileged records or copies of any such records.

84. Obligations and penalties of this Administrative Consent Order are imposed pursuant to the police powers of the State of New Jersey for the enforcement of law and the protection of the public health, safety, and welfare and are not intended to constitute debt or debts which may be limited or discharged in a bankruptcy proceeding.

85. In addition to the Department's statutory and regulatory rights to enter and inspect, SCCC shall allow the Department and its authorized representatives access to the site at all times for the purpose of

monitoring SCCC's compliance with this Administrative Consent Order and/or to perform any remedial activities SCCC fails to perform as required by this Administrative Consent Order.

86. SCCC shall not construe any informal advice, guidance, suggestions, or comments by the Department, or by persons acting on behalf of the Department, as relieving SCCC of its obligation to obtain written approvals as required herein, unless the Department specifically relieves SCCC of such obligations, in writing in accordance with the following paragraph.

87. No modification or waiver of this Administrative Consent Order shall be valid except by written amendment to this Administrative Consent Order duly executed by SCCC and the Department.

88. SCCC hereby consents to and agrees to comply with this Administrative Consent Order which shall be fully enforceable as an Order in the New Jersey Superior Court upon the filing of a summary action for compliance pursuant to N.J.S.A. 13:1D-1 et seq., the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

89. In the event that the Department determines that a public meeting concerning the cleanup of the site is necessary at any time, SCCC shall ensure that SCCC's appropriate representative is prepared, available, and participates in such a meeting upon notification from the Department of the date time and place of such meeting.

90. SCCC waives its rights to an administrative hearing concerning the entry of this Administrative Consent Order pursuant to N.J.S.A. 52:14B-1 et seq. and N.J.S.A. 58:10A-1 et seq.

91. SCCC agrees not to contest the authority or jurisdiction of the Department to issue this Administrative Consent Order; SCCC further agrees not to contest the terms or conditions of this Administrative Consent Order, except as to interpretation or application of such terms and conditions in any action brought by the Department to enforce the provisions of this Administrative Consent Order. Respondents reserve their rights, entirely at their own risk not to comply with any direction or decision of the Department and to defend itself in any action brought to enforce such direction or decision which Respondents believe is arbitrary, capricious, or unreasonable. In any such enforcement proceedings, Respondents shall have the burden of proof to establish that any direction or decision of the Department was arbitrary, capricious, or unreasonable. Should Respondents prevail in any such enforcement proceeding initiated by the Department, the Department agrees to refund any stipulated penalties paid by Respondents for the alleged violation which precipitated the initiation of the enforcement action.

92. SCCC shall provide a copy of this Administrative Consent Order to each contractor and subcontractor retained to perform the work required by this Administrative Consent Order and shall condition all contracts and subcontracts entered for the performance of such work upon compliance with the terms and conditions of this Administrative Consent Order. SCCC shall be responsible to the Department for ensuring that their contractors and

subcontractors perform the work herein in accordance with this Administrative Consent Order.

93. SCCC shall give written notice of this Administrative Consent Order to any successor in interest at least 90 calendar days prior to transfer of ownership of SCCC's facilities which are the subject of this Administrative Consent Order, and shall simultaneously verify to the Department that such notice has been given. This requirement shall be in addition to any other statutory or regulatory requirements arising from the transfer of ownership of SCCC's facilities.

94. The requirements of this Administrative Consent Order shall be deemed satisfied upon the receipt by SCCC of written notice from the Department that SCCC has demonstrated, to the satisfaction of the Department, that the obligations imposed by this Administrative Consent Order have been completed by SCCC.

95. Within thirty (30) calendar days of the effective date of this Administrative Consent Order, SCCC shall record a copy of this Administrative Consent Order with the County Clerk, Hudson County, State of New Jersey.

96. The Site may be freely alienated provided that:

a. At least ninety (90) calendar days prior to the date of such alienation, SCCC shall notify the Department in writing of the proposed alienation, the name of the grantee, and a description of the grantor's obligations, if any, to be performed by such grantee.

b. Any contract to transfer the Site shall require the grantee to allow the implementation and continuation of all activities and obligations pursuant to this Administrative Consent Order and to allow access to the Site for purposes of such activities and obligations. SCCC's obligations under this Administrative Consent Order shall continue unless the grantee agrees to assume SCCC's obligations and unless the Department agrees to permit the grantee to assume the obligations of SCCC.

c. Any deed, title or other instrument of conveyance regarding the Site shall contain a notice that the Site is the subject of this Administrative Consent Order. Any such deed, title, or instrument of conveyance shall be subject to the requirements set forth in paragraph 97 below regarding the use of the Site and deed restrictions.

97. SCCC agrees not to take any actions or make any use of the Site inconsistent with the remedy at the Site. SCCC agrees to the imposition of such use and/or access restrictions as may be deemed necessary by the Department. The use and access restrictions are to run with the land and be for the benefit of and enforceable by the Department and the citizens of the State of New Jersey. SCCC shall record the restrictions with the Hudson County Clerk immediately upon request of the Department that SCCC do so.

98. SCCC shall submit to the Department, along with the executed original Administrative Consent Order, the appropriate documentary evidence

(such as a corporate resolution) that the signatory for SCCC has the authority to bind SCCC to the terms of this Administrative Consent Order.

99. This Administrative Consent Order shall become effective upon the execution by the Department.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date: 10-20-89

By: Ronald T. Corcoran
Ronald T. Corcoran, Assistant Director,
Responsible Party Cleanup Element
Division of Hazardous Waste Management

STANDARD CHLORINE CHEMICAL CORPORATION

Date: October 18, 1989

By: Anthony R. Sinibaldi
Name: Anthony R. Sinibaldi
Title: Executive Vice President

LIST OF APPENDICES

<u>APPENDIX</u>	<u>TITLE</u>	<u>PAGE</u>
A	INTERIM REMEDIAL MEASURES SCOPE OF WORK	A-20
B	REMEDIAL INVESTIGATION SCOPE OF WORK	B-23
C	QUALITY ASSURANCE REQUIREMENTS	C-38
D	MONITOR WELL SPECIFICATIONS	D-40
E	FEASIBILITY STUDY SCOPE OF WORK	E-41
F	REMEDIAL ACTION SCOPE OF WORK	F-46
G	LETTER OF CREDIT WORDING DOCUMENT	G-48
H	STANDBY TRUST WORDING DOCUMENT	H-51

FEASIBILITY STUDY SCOPE OF WORK

I. Requirements of Feasibility Study

- A. Identify and list all potentially viable remedial action alternatives for the contaminants at the Site, emanating from the Site or which have emanated from the Site;
- B. Develop alternatives to incorporate remedial technologies into a comprehensive, site-specific approach;
- C. Evaluate and compare remedial action alternatives; and,
- D. Recommend an environmentally sound remedial action alternative which will, in a timely manner meet each of the following three criteria:
 1. remediate contaminants at the Site, emanating from the Site, or which have emanated from the Site, in compliance with the following:
 - a. applicable regulatory standards, including but not limited to those for air, soil, surface-water and ground-water (e.g., N.J.A.C. 7:14A-1 et seq., 7:9-4, 7:9-6); or,
 - b. where no applicable regulatory standards (as described in a. above) exist, advisories or guidance, provided by the Department, which shall ensure protection of human health and the environment for all media;
 2. Remedy damage to the environment (e.g. restoration of natural resources); and,
 3. Provide protection of human health and the environment.

II. Contents of Feasibility Study Work Plan

- A. A statement of the requirements for the feasibility study pursuant to Section I., above.
- B. A detailed description of key interim feasibility study activities including:
 1. dates for submission of all permit applications required for completion of feasibility study; and
 2. date for submitting feasibility study report to the Department.
- C. Development of Alternatives
 1. Establish remedial action objectives by:
 - a. specifying contaminants;

- b. specifying media of concern;
 - c. identifying potential exposure routes and receptors; and
 - d. specifying remediation goals as identified by the Department pursuant to I.D. above.
 - 2. Develop general response actions for each medium of concern by defining potential response actions, singly or in combination, that may be taken to satisfy the remedial action objectives for the Site (e.g. containment, treatment, excavation and pumping); and,
 - 3. Identify volumes or areas of media to which general response actions may be applied.
- D. A presentation of initial screening procedures in accordance with the following:
- 1. Identify those technologies that are applicable to the contaminants present, their physical matrix and other site characteristics;
 - 2. Perform an initial screening of the technologies based on the following:
 - a. effectiveness in minimizing residual risk and affording long term protection in a timely manner;
 - b. implementability, including the technical feasibility and availability of the technologies; and
 - c. cost.
- E. A presentation of characteristics to be used to describe remedial action alternatives remaining after initial screening in accordance with the following:
- 1. appropriate treatment and disposal technologies, as well as any permanent facilities required;
 - 2. required engineering considerations (e.g., treatability study, pilot treatment facility, additional studies needed to proceed with final remedial design);
 - 3. environmental and human health impacts and methods for mitigating or eliminating any adverse impacts;
 - 4. operation and maintenance/monitoring requirements of the completed remedy;
 - 5. offsite disposal needs and transportation plans;
 - 6. temporary storage requirements;

7. requirements for health and safety plans during remedial implementation (including both onsite and offsite health and safety considerations);
 8. describe how the alternative could be phased into individual operable units, including how various components of the remedy could be implemented individually or in groups resulting in a functional phase of the overall remedy;
 9. how the alternative could be segmented into areas to allow implementation of differing phases of the alternative;
 10. how alternatives could be combined to create more effective alternatives;
 11. which Federal, State and local permits would be necessary and an outline the information necessary for the development of each of the permit applications; and
 12. the estimated time required for implementation.
- F. Based on the characteristics of each remedy described pursuant to Section II. E. above, detailed discussion of procedures to evaluate and compare the remedial action alternatives remaining after the initial screening in accordance with the following:
1. overall protection of human health and the environment;
 2. remediation goals in compliance with Section I.D. above;
 3. long term effectiveness and permanence;
 4. reduction of toxicity, mobility or volume;
 5. short term effectiveness;
 6. implementability;
 7. cost; and
 8. community acceptance.
- G. Presentation of procedure concerning recommendation of remedial action alternative in accordance with the following:
1. based on the detailed evaluation process, recommend an environmentally sound remedial action alternative which will, in the most timely manner, meet the requirements in Sections I.D. and II.F. above; and,
 2. prepare a detailed rationale for recommending the remedial action alternative, stating the advantages over other alternatives considered.

III. Content of Feasibility Study Report